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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/665,534 09/19/00 YOSHIMURA

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EXAMINER

SHOSHO, C

ART UNIT

PAPER NUMBER

1714

DATE MAILED:

10/11/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/665,534

Applicant(s)

Y shlmura et al.

Examiner

Callie Shosh

Art Unit

1714



– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirements.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/523,619.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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**DETAILED ACTION**

**Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claim 1 recites that the glittering particles have “a ratio of smoothness on the particle surface to a median diameter of not greater than 0.11”. The scope of the claim is confusing given that it is not clear what is meant by “a” median diameter. Is this the same median diameter as disclosed in line 3 of the claim? If not, what diameter is it? If the former is true, it is suggested that “a” is replaced with “the” or “the said” before “median diameter” in line 4 of the claim.

(b) Claim 2 recites “pseudo-plasticity fluidity (thixotropic property)”. The scope of the claim is confusing given that a pseudo-plastic fluid exhibits a decrease in viscosity with an increase in shear rate while a thixotropic fluid exhibits a decrease in viscosity with an increase in shear rate as well as a dependence of viscosity on time. Thus, it is not clear which non-Newtonian behavior applicants are claiming.

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(c) Claim 3 recites “an ELD-typed viscometer (3<sup>0</sup> R14 cone at the temperature of 20<sup>0</sup> C).”

The scope of the claim is confusing because it is not clear what is meant by “typed”. What viscometers are encompassed by the phrase “ELD-typed”? The addition of the word “type” extends the scope of the claims so as to render them indefinite since it is unclear what “type” is intended to convey. The addition of the word “type” to the otherwise definite expression renders the definite expression indefinite by extending its scope. Ex parte Copenhaver, 109 USPQ 118 (Bd. App. 1955).

Further the scope of the claim is confusing because it is not clear why “3<sup>0</sup> R14 cone at the temperature of 20<sup>0</sup> C” is in parentheses. Is the viscosity actually measured using this cone and at this temperature? If so, it is suggested that the parentheses are removed.

Finally, it is not clear what is meant by “at the temperature of 20<sup>0</sup> C”. What temperature does this refer to? It is suggested that “the” is changed to “a” before “temperature”.

The same problems arise in claims 4 and 27 which recite similar claim language.

(d) Claim 3 recites the limitation “the T.I. value, the thixotropy index” in line 2. There is insufficient antecedent basis for this limitation in the claim given that there is no disclosure of T.I. value or thixotropy index in claim 1 on which claim 2 depends. It is suggested that the phrase is changed to “thixotropy index”.

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(e) Claim 4 recites that the ink has “the viscosity of 1000~15000 mPa s”. It is not clear what is meant by “the” viscosity. It is suggested that “the” is deleted. Further, it is not clear what is meant by “~”. Does this mean “to about”, “to approximately”, etc? It is suggested that “~” is changed to “-”.

(f) Claims 5 and 6 each recite the limitation "the said scaly glass particles" in line 2. There is insufficient antecedent basis for this limitation in either of the claims given that there is no disclosure of scaly glass particles in claim 1 on which each of the claim depends. Should “glass” be changed to “glittering”?

(g) Claim 9 recites “wherein a water-soluble resin is contained in 0.01-40%...”. The scope of the claim is confusing because it is not clear what is meant by “a” water-soluble resin”. Is this the same water-soluble resin disclosed in claim 1? If so, it is suggested that before “water-soluble resin”, “a” is changed to “the” or “the said”. Similar questions arise in claim 10 which disclose “a” colorant.

(h) Claim 15 recites the limitation "the water-soluble thickening resin" in line 3. There is insufficient antecedent basis for this limitation in the claim given that there is no disclosure of a thickening resin in any of the claims on which 15 ultimately depends.

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(i) Claim 17, which depends on claim 15, recites that the ink “further” contains a colorant. Given that claim 15 ultimately depends on claim 1 which already discloses a colorant, it is not clear if the colorant of claim 17 is in addition to this colorant, i.e. the ink contains two colorants, or is the same colorant. Clarification is requested.

(j) Claims 19 and 20 each recite the limitation “the written mark” in line 1. There is insufficient antecedent basis for this limitation in the claim. It is suggested that the phrase is changed to “a written mark”.

(k) Claims 21 and 25 each recite “wherein the rate of concavo-convex resin coated film covering the surface of the scaly glittering particles...”. The scope of the claim is confusing because it is not clear what is meant by “rate of concavo-convex”. Further, it is not clear what the “resin coated film” is or what resin this refers to. Clarification is requested.

(l) Claims 22 and 26 each disclose the smoothness of “the coated film (the written mark)”. The scope of the claim is confusing because it is not clear what, or if, the difference is between coated film and written mark. Given that there is no antecedent basis for the phrase “the coated film”, it is suggested that the above phrase is changed to “the written mark”.

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**Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 6-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 600205.

EP 600205, an English translation of which is included in this office action, disclose an aqueous-based ink for pens wherein the ink comprises water, 0.5-25% pigment particle which is mica coated with titanium oxide or iron oxide that has diameter of less than 60  $\mu\text{m}$ , 0.5-20% solvent, 0.5-10% colorant, and 0.5-20% water-soluble binder (page 2, last paragraph-page 3, fourth paragraph).

Although there is no explicit disclosure that the ink is glittering, given that EP 600205 disclose an identical type and amount of pigment particle as presently claimed, i.e. mica coated with titanium oxide or iron oxide, it is clear that the ink is inherently glittering.

Further, there is no explicit disclosure in EP 600205 of the ratio of smoothness to diameter of the pigment particle or the surface coating ratio of the colorant on the pigment particle. However, given that EP 600205 disclose identical pigment particle as presently claimed

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including particle with the same diameter as presently claimed, it is clear that the pigment particle inherently possesses the ratio of smoothness to diameter as presently claimed and that the surface covering ratio is inherently the same as presently claimed.

In light of the above, it is clear that EP 600205 anticipates the present claims.

5. Claims 1-4, 6-10, 12-17, 19-20, 22-24, and 26-28 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 10077438.

JP 10077438, an English translation of which is included in this office action, disclose an aqueous-based ink for pens wherein the ink comprises water, 1-10% pigment particle such as mica coated with titanium oxide or iron oxide that has diameter of 5-60  $\mu\text{m}$ , 30% solvent, 0.1-10% colorant, 0.1-3% water-soluble resin, and 50% water-soluble binder which is a resin emulsion with 50% resin in terms of solids content so that the ink comprises 25% resin emulsion in terms of solids content. There is disclosed a method for producing written mark as well as a written mark. It is also disclosed that the ink ingredients are mixed together which would intersperse the colorant among the coated mica pigment particles (paragraphs 4-7, 10, 16, and 18).

It is disclosed that as shear rate increases, viscosity decreases so that the ink is clearly pseudoplastic. Further given that the ink is pseudoplastic and given that at 1 rpm, the viscosity ranges from approximately 1,000-9,000 mPa s, it is clear that at 0.5 rpm, the viscosity will be greater than the viscosity at 1 rpm and thus meet the requirements of the present claims (Table 2).



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It is disclosed that the pigment particle has diameter of 5-60  $\mu\text{m}$ , while the colorant has diameter of, for instance, 0.11  $\mu\text{m}$ . Given that the particle size of the colorant is much smaller than that of the pigment particles, it is clear that the surface coating ratio of the colorant on the pigment particle will be less than 80% or less than 40% as presently claimed (paragraph 5 and paragraph 16, pages 13-14).

Although there is no explicit disclosure that the ink is glittering, given that JP 10077438 disclose an identical type and amount of pigment particle as presently claimed, i.e. mica coated with titanium oxide or iron oxide, it is clear that the ink is inherently glittering.

Further, there is no explicit disclosure in JP 10077438 of the ratio of smoothness to diameter of the pigment particle or the smoothness of the written mark. However, given that JP 10077438 disclose identical ink as presently claimed including pigment particle with the same diameter as presently claimed, it is clear that the pigment particle inherently possesses the ratio of smoothness to diameter as presently claimed and that the written mark inherently possesses smoothness as presently claimed.

In light of the above, it is clear that JP 10077438 anticipates the present claims.

6. Claims 1-2, 6-10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07118592.

JP 07118592, an English translation of which is included in this office action, disclose an aqueous-based pseudoplastic ink for pens wherein the ink comprises water, 5-20% pigment

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particle which is mica coated with titanium oxide or iron oxide that has diameter of 5-60  $\mu\text{m}$ , 0.5-40% solvent, colorant, and water-soluble binder (paragraphs 7-11). It is calculated from example 1 that the ink comprises approximately 17% water-soluble binder.

Although there is no explicit disclosure that the ink is glittering, given that JP 07118592 disclose an identical type and amount of pigment particle as presently claimed, i.e. mica coated with titanium oxide or iron oxide, it is clear that the ink is inherently glittering.

Further, there is no explicit disclosure in JP 07118592 of the ratio of smoothness to diameter of the pigment particle or the surface coating ratio of the colorant on the pigment particle. However, given that JP 07118592 disclose identical pigment particle as presently claimed including particle with the same diameter as presently claimed, it is clear that the pigment particle inherently possesses the ratio of smoothness to diameter as presently claimed and that the surface covering ratio is inherently the same as presently claimed.

In light of the above, it is clear that JP 07118592 anticipates the present claims.

**Claim Rejections - 35 USC § 103**

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

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9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over EP 600205, JP 10077438, or JP 07118592 any of which of view of either Marshall et al. (U.S. 3,331,699) or Yolles (U.S. 3,053,683).

The disclosures with respect to EP 600205, JP 10077438, and JP 07118592 in paragraphs 4, 5, 6, respectively, are incorporated here by reference.

The difference between either EP 600205, JP 10077438, or JP 07118592 and the present claimed invention is the requirement in the claims of specific type of glittering particle.

Marshall et al. disclose the use of glass coated with metal oxide wherein the glass particles have high degree of lustrous sparkle as well as brilliant color (col.2, line 55, col.3, line 2 and col.3, lines 16-21).

Alternatively, Yolles disclose the use of glass flakes suitable for use in coating composition in order to produce a glittery finish (col.1, lines 10-13 and 24-28, col.2, line 15, col.3, lines 54-59, and col.8, line 14).

In light of the motivation for using specific type of glittering particle disclosed by either Marshall et al. or Yolles as described above, it therefore would have been obvious to one of ordinary skill in the art to use such particle in the ink of either EP 600205, JP 10077438, or JP 07118592 in order to produce a glittering ink, and thereby arrive at the claimed invention.

10. Claims 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 600205, JP 10077438, or JP 07118592 any of which of view of Okuda et al. (U.S. 5,510,397).

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The disclosures with respect to EP 600205, JP 10077438, and JP 07118592 in paragraphs 4, 5, 6, respectively, are incorporated here by reference.

The difference between either EP 600205, JP 10077438, or JP 07118592 and the present claimed invention is the requirement in the claims of an opacifying pigment.

Okuda et al., which is drawn to ink composition, disclose the use of opacifying pigment in order to produce ink with good optical properties (col.2, lines 43-60 and col.3, lines 51-63).

In light of the motivation for using opacifying pigment disclosed by Okuda et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such opacifying pigment in the ink of either EP 600205, JP 10077438, or JP 07118592 in order to produce an ink with good optical properties, and thereby arrive at the claimed invention.

11. Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 600205 or JP 07118592 either of which in view of Morita et al. (U.S. 6,099,629).

The disclosures with respect to EP 600205 and JP 07118592 in paragraphs 4 and 6, respectively, are incorporated here by reference.

The difference between either EP 600205 or JP 07118592 and the present claimed invention is the requirement in the claims of binder which is a resin emulsion.

Morita et al., which is drawn to ink composition, disclose the use of resin emulsion with minimum film-forming temperature less than 5° C in an amount of 1-10% based on solids

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content in order to control the stickiness and drying of the ink (col.6, lines 38-50 and col.13, lines 47-51).

In light of the motivation for using resin emulsion disclosed by Morita et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use resin emulsion in the ink of either EP 600205 or JP 07118592 in order to control the stickiness and drying of the ink, and thereby arrive at the claimed invention.

12. Claims 1, 6-10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 600205.

EP 600205 disclose an aqueous-based ink for pens wherein the ink comprises water, 0.5-25% pigment particle which is mica coated with titanium oxide or iron oxide that has diameter of less than 60  $\mu\text{m}$ , 0.5-20% solvent, 0.5-10% colorant, and 0.5-20% water-soluble binder (page 2, last paragraph-page 3, fourth paragraph).

Although there is no explicit disclosure that the ink is glittering, given that EP 600205 disclose an identical type and amount of pigment particle as presently claimed, i.e. mica coated with titanium oxide or iron oxide, it is clear that the ink is inherently glittering.

The difference between EP 600205 and the present claimed invention is the requirement in the claims of (a) ratio of smoothness to diameter of the glittering particles and (b) surface coating ratio of the colorant on the pigment particle.

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With respect to difference (a), it is noted that while EP 600205 disclose the diameter of the glittering particles, there is no explicit disclosure of the ratio of smoothness to diameter. However, given that the degree to which the pigment and thus the ink glitters depends on the smoothness of the pigment surface, it would have been obvious to one of ordinary skill in the art to choose pigment with ratio of smoothness to diameter, including that presently claimed, in order to produce an ink with desired glittering effect, and thereby arrive at the claimed invention.

With respect to difference (b), it would have been within the skill level of one of ordinary skill in the art to recognize that if the colorant covers too much of the glittering particles, this would lower or alter the level of glittering exhibited by the ink. Thus, it would have been obvious to one of ordinary skill in the art to choose colorants with particle size which would produce surface coating ratio, including that presently claimed, in order to ensure that the glittering particles are able to impart to the ink the desired level of glittering, and thereby arrive at the claimed invention.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshimura et al. (U.S. 6,171,381) and Loftin (U.S. 5,048,992) each disclose ink composition comprising metallic powder pigment, colorant, water, solvent, and water-soluble resin, however, there is no disclosure of glittering particles.

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De La Fuente (U.S. 5,958,123) disclose an ink composition comprise mica coated with titanium oxide, water, and water-soluble binder, however, there is no explicit disclosure that the ink glitters as well as no disclosure of colorant as presently claimed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie Shosho whose telephone number is (703) 305-0208. The examiner can normally be reached on Monday-Thursday from 7:00 am to 4:30 pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Callie Shosho

10/6/01

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